

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An integrated circuit comprising:
 - (a) a plurality of modules comprising a plurality of message sending modules M and a plurality of message receiving modules S;
 - (b) a network configured to exchange messages between said plurality of message sending modules M and said plurality of message receiving modules S based on request-response transactions;
 - (c) active network interface means associated with each of said plurality of message sending modules M;
 - (d) passive network interface means associated with each of said plurality of message receiving modules S,
 - wherein said active and passive network interface means are configured to manage communication between said plurality of message sending modules M and said plurality of message receiving modules S by sending requests encoding operations, such as read, write, flush, test, set and nop, between the plurality of message sending modules M and the plurality of message receiving modules S;
 - wherein said active network interface means is configured to perform communication management functions by receiving message requests issued by said plurality of message sending modules M including first information and second information,
 - wherein said active network interface means includes address translation means adapted to determine from said received message requests which of said message receiving modules S is being addressed in said message requests issued from said plurality of message sending modules M based on said first information and further determine the particular location within the addressed message receiving

module S based on said second information

wherein said first information is indicative of the location of said message receiving module S within the network being addressed by one of said plurality of message sending modules M in said message request and is comprised of (1) a connection identifier identifying two or more message receiving modules S and (2) a port identifier of the passive network interface means

~~An integrated circuit comprising a plurality of modules and a network arranged for transferring messages between said modules wherein a message issued by a first module M comprises first information indicative of a location of one of said modules S being addressed within the network, and second information indicative of a particular location within the addressed module S, such as a memory, or a register address, the integrated circuit comprising~~

~~at least one address translation means for receiving said message issued by said first module M comprising said first and second information and arranging the first and the second information as a single address,~~

~~wherein said address translation means is adapted to:~~

~~determine which module S is being addressed in said received message based on said first information of said single address, and~~

~~further determine the particular location within the addressed module S based on said second information of said single address,~~

~~arranging, at said translation unit, the first and the second information comprising said message as a single address,~~

~~determining, at a translation unit, which addressed module S is being addressed in said message issued from said first module M based on said single address, and~~

~~further determining, at said translation unit, further determine the particular location within the addressed module S based on said single address.~~

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) The integrated ~~[[Integrated]]~~ circuit according to claim ~~[[2]]~~ 1, wherein said address translation means comprises an address mapping table configured to store relations between global and local memory mapping.
5. (Currently Amended) Integrated circuit according to claim 4, wherein said address mapping table contains fields for every channel of a connection between said message sending module M and at least one addressed message receiving module S, for network interface ports of a connection, and for local addresses in said at least one addressed message receiving module ~~[[modules]]~~.
6. (Currently Amended) A method ~~[[Method]]~~ for exchanging messages in an integrated circuit comprising a plurality of modules, the messages between the modules being exchanged via a network wherein a message issued by an addressing a first ~~module M~~ comprises:
first information indicative of the location of an addressed message receiving module S within the network and is comprised of (1) a connection identifier identifying two or more message receiving modules S (2) an identifier of the passive network interface means, indicative of a location of one of said modules S being addressed within the network, and second information indicative of a particular location within the addressed message receiving module S, such as a memory, or a register address, the method including the steps of:
 - (a) arranging, at said message sending module M, the first and the second information comprising said issued message as a single address,
 - (b) issuing from said addressing first ~~module M~~ ~~[[issuing]]~~ a message request including data and/or connection properties to an address translation unit included as part of an active network interface module,
~~arranging, at said translation unit, the first and the second information comprising said message as a single address,~~
 - (c) determining, at said translation unit, which message receiving module S is being addressed in said message request issued from said ~~[[first]]~~ message sending

module M based on said single address, and

(d) further determining, at said translation unit, the particular location within the addressed message receiving module S based on said single address.

7. (Cancelled).
8. (Previously Presented) The method according to claim 6, wherein communication between said plurality of modules is performed over connections.
9. (Previously Presented) The method according to claim 8, wherein a connection comprises a set of channels, each channel having a set of connection properties between said message sending module M ~~a first module~~ and at least one message receiving ~~[[second]]~~ module.
10. (Previously Presented) The method according to claim 8, wherein connection types comprise: simple connections, multicast connections, narrowcast connections.
11. (Previously Presented) The method according to claim 9, wherein said connection properties comprise: ordering, flow control, throughput, latency, lossiness, transmission termination, transaction completion, data correctness, priority and data delivery.
12. (Currently Amended) The method according to claim 10, wherein said simple connection is a connection between ~~[[a]]~~ said message sending module M and a single addressed slave module S.
13. (Currently Amended) The method according to claim 10, wherein said multicast and narrowcast connections are connections between ~~[[a]]~~ said message sending module M and one or more addressed slave modules S.
14. (Cancelled)

15. (Currently Amended) The method according to claim 7, wherein said ~~at least one~~ network interface means comprises at least two network interface ports to allow a message sending module M associated with said at least one network interface to communicate with a router network or at least one other message receiving module S from among said plurality of message receiving modules S.
16. (Cancelled)